research programme, which should lead to better estimates of staff sickness and cost of injury, is likewise hospital based.

The "health at work" campaign and specific initiatives such as alcohol policies lie within the "health promotion" tradition of health in the workplace, which is young compared with the "health protection" tradition.

The health protection tradition has 19th century roots and is backed by health and safety legislation and a raft of regulations on inspection of workplaces, health and safety committees, control of substances hazardous to health, and reporting of accidents. Employers in primary care are legally obliged to take reasonable measures against foreseeable hazards, which officially include manual handling, violence, infections (including with HIV), needlesticks and clinical waste, radiation, respiratory irritants such as glutaraldehyde, medical devices, and stress.[4] It is a formidable list and clearly could be added to. Children in clinics, for instance, may endanger themselves,[5] other patients, or the workforce.

The cleat that unites these two traditions of workplace health is occupational health. Its role is fourfold: to promote adherence to health and safety legislation; assess health on recruitment; surveillance—for example, injuries, hepatitis B status, and sickness absence; and health promotion and education for the workforce. Occupational health thus enables employers to deliver what the law requires or what public health advocates, and is not expensive, at £50 or less per employee per year. This looks especially cheap when set against the cost of a medically inappropriate recruitment or of unmanaged long term absence due to sickness in a small primary care team. Yet moves to purchase this or similar health benefits for staff may be hamstrung by the funding regulations of family health services.

Better workplace health for primary care will in any event depend on self help by its practitioners, who will need to be convinced of its business value. Uniprofessional approaches continue to have a place (witness the rapid decline in hepatitis B among dentists[6]), but schemes such as the sick doctors scheme deal with late effects. Tackling stress, which often stems from relationships in the primary care team and with patients, calls for a team approach. The health commissions should research their local situation and facilitate practices' efforts. They can remain free of the enforcement role, which lies with the health and safety inspectorate.

Commissioners should also look beyond the four contracted professions to the wider penumbra of primary workers such as chiropodists and staff of nursing homes, and beyond those into the general commercial environment. That environment is mainly one of small businesses—shops, garages, light industrial units, and so on—which in our area make up 90% of employers.[7] These will have many of the constraints but few of the strengths seen in primary care. Any serious attempt to improve the health of the nation's workplaces must encompass them, but improving health in the small business of primary care is an obvious early step in the learning curve.

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Children's dental health and medicines that contain sugar

Doctors must take the lead by prescribing sugar free medicines whenever possible

Dental caries is a multifactorial disease, but the primary aetiological agent is sugar. To help children and their parents control dental caries the frequency of sugar consumption must be reduced. Many people equate this with cutting down on sweets, but they are often unaware of the sugars in foods and drinks such as biscuits, cakes, breakfast cereals, baby drinks, cordials, and soya milk. Another commonly used product that contains sugar and is given to children regularly is liquid medicine.

Since 1984 the *British National Formulary* has warned that "Although liquid preparations are particularly suitable for children, many contain sucrose which encourages dental decay."[1] In view of this harmful effect, doctors have been recommended to prescribe sugar free medicines whenever possible. Previously such advice was difficult to follow because only a few sugar free medicines were available, but the pharmaceutical industry has responded by reformulating old preparations and producing new varieties that do not contain sugar. The *British National Formulary* and *MIMS* (the monthly index of medical specialties) specifically indicate medicines that are sugar free; the drug dictionaries on some computerised prescribing systems also indicate preparations that are sugar free. Despite these positive steps, medicines that contain sugar are still the ones most commonly prescribed by doctors and sold by pharmacists.[2]

To promote the use of sugar free medicines a campaign was organised in the north west of England, targeting doctors, pharmacists, health visitors, and mothers with young children.[3] The pharmacists showed great enthusiasm for this campaign, but when questioned they highlighted two problems. Firstly, doctors usually prescribed medicines containing sugar and rarely offered sugar free alternatives. Secondly, the act of prescribing medicines containing sugar was seen as endorsing their use. The pharmacists reported that they would have liked to give a sugar free medicine when dispensing a prescription but current regulations forbade them. If a doctor prescribes a generic medicine and does not specify SF on the prescription then a drug that contains sugar has to be dispensed even if both the pharmacist and the parent would prefer a sugar free preparation. This impasse could be remedied if doctors could be persuaded to write SF on their prescription.

When doctors in the north west of England were questioned about prescribing sugar free medicines some expressed concern about their palatability: poor palatability might compromise compliance.[4] This does not seem to be a

problem, especially if a child starts off by taking sugar free medicines and is not allowed to develop a taste for a particular sugary medicine. Other doctors mentioned that they did not always have the time to look through the *British National Formulary* or *MIMS* to find a sugar free variety—but, in these days of prescriptions that are issued by computer, quickly scanning the drug dictionary held in the computer's memory to identify a sugar free alternative is possible. Software manufacturers could therefore have a leading role in promoting sugar free medicines by ensuring that these are listed before the ones that contain sugar, or by highlighting the sugar free preparations.

To minimise the harmful effects of those medicines that are available only in the sugar form it is recommended that, whenever possible, they should be taken at mealtimes, not between meals, and definitely not last thing at night or during the night.[4] The flow of saliva is greatly curtailed at night, so the protective cleansing and buffering actions are lost; hence a sugary medicine taken at this time is particularly damaging to teeth.

A relatively new concern has been the recognition of the detrimental effects on dental health of children who are taking liquid nutritional supplements—for example, young patients who are intolerant of lactose or protein. These preparations are listed in the section on borderline substances in the *British National Formulary*. Many of them are listed as being lactose free; in addition, the formulary indicates that they are also sucrose or fructose free. This implies that they are "sugar free," but they usually contain glucose as the source of carbohydrate. Although sucrose is the most cariogenic sugar, glucose runs a close second, and if they are taken regularly between meals or in a bottle as a comforter last thing at night destruction of the teeth is common.

Parents should be advised that these borderline substances are rich in sugar and are as harmful to the teeth as any other drink that contains sugar and should be used as food intakes at set times, not as drinks to be taken at will or as comforters. Young patients taking drugs containing sugar long term should be prescribed a fluoride supplement and advised to register with a dentist for routine screening and advice.

If the tradition of giving children medicines that contain sugar is to be broken it is essential that doctors take the lead by prescribing sugar free medicines whenever possible.

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Doctors who smoke

Should medical students who smoke be channelled away from primary care?

An apocryphal tale in public health, said to have originated from a candid tobacco industry executive, is that each doctor who smokes is worth hundreds of thousands of dollars to the industry. This is certainly an understatement when it comes to the small group of well rewarded doctors and scientists who routinely do the industry's bidding for them in government inquiries and in the media.[1] But what of general practitioners who smoke? There are two considerations here.

The first consideration concerns doctors' roles and, many would add, responsibilities as exemplars. A recent Australian study of smokers from low socioeconomic groups found that half of them agreed with the statement that "a lot of doctors smoke."[2] In fact, only 9% of male and 4% of female doctors in Australia admit to smoking cigarettes—the lowest occupational rate yet reported.[3] Such beliefs may reflect the public's scepticism about virtue but are more likely to be due to the amplification of gossip about the small proportion of doctors who parade their smoking. Whatever the origin of this belief, the community may have finely set antennas for hypocrisy: how can doctors condemn smoking when so many of them do it themselves, and, by extension, "Why should I stop smoking when plenty of doctors don't?"

The second consideration is whether smoking by doctors inhibits any of them from counselling patients about smoking. Despite the enormous publicity given to the health consequences of smoking and, more recently, the efforts of drug companies to promote nicotine replacement therapy,[4] the depressing fact remains that doctors are either blind to their patients' smoking or unwilling to raise the issue. A recent British study reported that less than one third of smokers could recall being given advice to stop by their general practitioner.[5] In Australia just over half of smokers had been given such advice[6] and general practitioners could identify only 62% of their patients who smoked.[7]

An international study by Crofton and colleagues of smoking among medical students in 42 countries, which asked the students about their knowledge of its health consequences and looked at the implications for medical education, has reported disturbing levels of smoking and widespread ignorance about diseases caused by smoking.[8-12] In Europe nearly one in five male medical students smoke. In Japan the rate is one in three, with only just over half of students agreeing that cigarette smoking causes lung cancer. Smokers generally tell the truth about their smoking, but asking medical students if they smoke may be like asking theology students if they blaspheme.[13] Many of the self reported rates of smoking among medical students are likely to be underestimates. Crofton's group has circulated its findings to the deans of all European medical schools and asked them to take action. Some will be spurred into reviewing their curriculums.

But should medical schools do more? Is there a case for selecting only non-smoking medical students on to training schemes for primary care? Such a policy might invite analogies about the suitability of obese and sexually reckless students and raises the question "Where will it end?" Yet other professions, recognising the importance of public confidence, adopt policies about their members' lives that the community